



# ADP-1XX5A High Brightness Display Monitor User Manual

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# Warning!

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

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# **Table of Contents**

| Warnir        | ng!/Disclaimer  | 2              |
|---------------|---|----------------|
| <u>Chap</u> t | oter 1 Ge   | etting Started |
| 1             | 1.1 Features  | 5              |
|               | 1.2 Specifications  |                |
|               | 1.3 Dimensions  |                |
| 1             | 1.4 Brief Description of ADP-1XX5A                                    | 9              |
|               | 1.5 Display Mode  |                |
| <u>Chap</u> t | eter 2  | OSD            |
| 2             | 2.1 Front Panel OSD Functions   | 11             |
| 2             | 2.2 OSD Controls  | 12             |
| 2             | 2.3 Main Menu   | 13             |
| <u>Chap</u>   | oter 3  | Control Board  |
|               | .1 Introduction to PenMount 9036CH5 Control interface Touch Screen)   | 15             |
| 3.            | .2 Introduction to PenMount 6300A5 Control interface Touch Screen)    | •              |
| <u>Chap</u>   | ter 4   | Installation   |
| ۷             | 4.1 Windows XP/2003/Vista/7 Universal Drive                           |                |
| ,             | PenMount 9000/6000 series4.2 Configuring the PenMount Windows XP/2003 |                |
|               | 4.3 Uninstall the PenMount Windows XP/2003/Vi                         |                |
| Chap          | oter 5  | Software       |
|               |   |                |
|               | 5.1 Software Functions5.2 Software Function Description               |                |
| _             | J. ← JOILYVAIC I AIICHOII DCJCHDHOH                                   |                |

# **Figures**

| Figure 1.1: Dimensions of ADP-1125A                    | 6  |
|--|----|
| Figure 1.2: Dimensions of ADP-1155A                    | 7  |
| Figure 1.3: Dimensions of ADP-1195A                    | 8  |
| Figure 1.4: Front View of the ADP-1XX5A                | 9  |
| Figure 1.5: Rear View of the ADP-1XX5A                 | 9  |
| Figure 3.1: Bird's Eye View of PM9036CH5 Control Board | 15 |
| Figure 3.2: Mechanical Size of PM9036CH5 Control Board | 16 |
| Figure 3.3: Bird's Eye View of PM6300A5 Control Board  | 18 |
| Figure 3.4: Mechanical Size of PM6300A5 Control Board  | 19 |

# Chapter 1\_\_\_\_\_Getting Started

#### 1.1 Features

- 12.1"/15"/19" High Brightness (1,000 cd/m2) TFT LCD
- NEMA 4 / IP 65 compliant front bezel
- Rear OSD
- VESA 75-75 and panel Mount
- Front glass with Anti-Reflection, optional touch screen.
- AC 100-240V power input
- Default: VGA input, Optional for DVI, Video and S-Video input

# 1.2 Specifications

| Mode                   | ADD 1135A             | ADD 1155A        | ADD 1105A   |  |
|------------------------|-----------------------|------------------|-------------|--|
| Specs                  | ADP-1125A ADP-1155A   |                  | ADP-1195A   |  |
| LCD                    |                       |                  |             |  |
| Display Type           | 12.1"                 | 15"              | 19"         |  |
| Max. Resolution        | 800x600               | 1024x768         | 1280x1024   |  |
| Max. Color             | 16.2M                 | 16.2M            | 16.7M       |  |
| Luminance (cd/m²)      |                       | 1,000nits        |             |  |
| Viewing Angle<br>(H/V) | H:178 / V:178         | H:140 / V:125    | H:170/V:160 |  |
| Backlight Lifetime     | 50,000 Hours          |                  |             |  |
| Hardware               |                       |                  |             |  |
| OSD Control            |                       | On the rear side |             |  |
|                        | Default:              |                  |             |  |
|                        | VGA Input             |                  |             |  |
|                        | AC 100-240V inpo      | ut               |             |  |
| External I/O Port      | Optional:             |                  |             |  |
| External I/O Port      | DVI                   |                  |             |  |
|                        | Video                 |                  |             |  |
|                        | S-Video               |                  |             |  |
|                        | Touch I/O             |                  |             |  |
| Power                  | Power                 |                  |             |  |
| Power Input            | ver Input AC 100-240V |                  |             |  |

|                            |  |                      | 1            |
|----------------------------|--|----------------------|--------------|
| Touch Screen               |  |                      |              |
| Touch Screen Type          | Resistive Touch                                |                      |              |
| TS Control Board           | AMT 9  | 036 (RS-232) or 6300 | ) (USB)      |
| Interface                  |  | RS-232 or USB        |              |
| Light Transmission         |  | 80%                  |              |
| Mechanical Specifica       | tions  |                      |              |
| Construction               | Metal front pa                                 | nel + Metal housing, | Pantone 413C |
| Front Panel                | Anti-Reflection Glass                          |                      |              |
| IP Rating                  | Front Panel IP 65                              |                      |              |
| Mounting                   | Panel/VESA 75x75                               |                      |              |
| Dimensions                 | 340 x 260 x 59 410 x 310 x 59.7 467 x 379 x 68 |                      |              |
| <b>Environmental Speci</b> | fications                                      |                      |              |
| Operating                  |  | <b>0~50</b> ℃        |              |
| Temperature                | emperature                                     |                      |              |
| Storage                    | -20~60°C                                       |                      |              |
| Temperature                |  |                      |              |
| Storage Humidity           | 10~90% @40°C (non-condensing)                  |                      |              |
| Certificate                | CE / FCC Class A                               |                      |              |

# 1.3 Dimensions

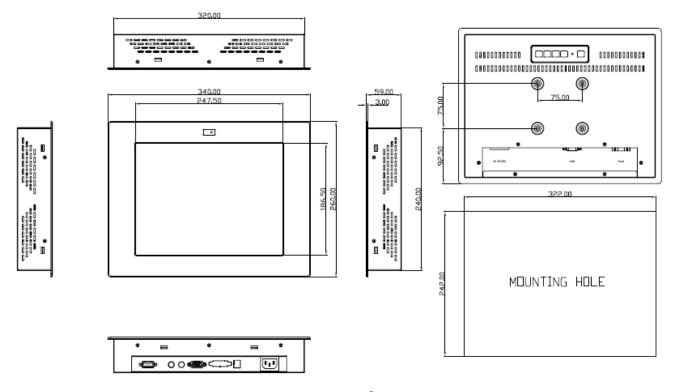


Figure 1.1: Dimensions of ADP-1125A

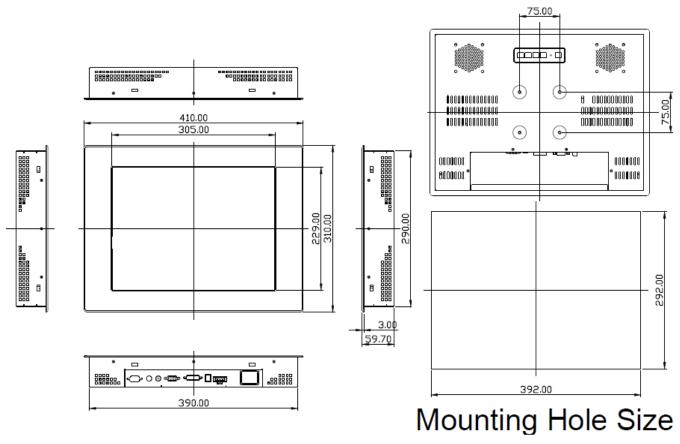


Figure 1.2: Dimensions of ADP-1155A

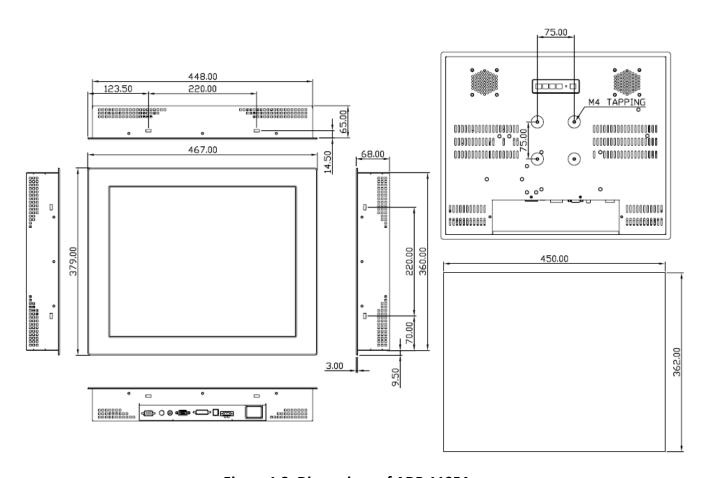


Figure 1.3: Dimensions of ADP-1195A

# 1.4 Brief Description of the ADP-1XX5A

ADP-1125A/1155A/1195A is a Steel Enclosure LCD Display that comes with a 12.1-inch/15-inch/19-inch (luminance of 1000 cd/m²) TFT LCD, and more outstanding features, thus giving you the best in monitoring and control applications.

The front panel of the display is sealed IP65 rating when it is VESA-mounted in a NEMA rated cabinet or enclosure. It is optional to be equipped with a resistive touch screen.



Figure 1.4: Front View of ADP-1XX5A

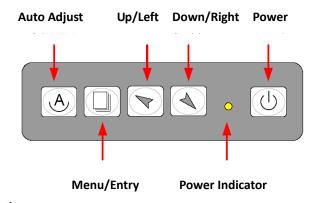


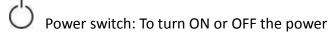
Figure 1.5: Rear View of ADP-1XX5A

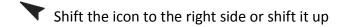
# 1.5 Display Mode

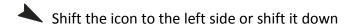
| Di             | splay Mode   | Hori. Sync (KHz) | Vert. Sync. (Hz) |
|----------------|--------------|------------------|------------------|
|                |              | 31               | 60               |
| VG             | A 640 x 480  | 38               | 72               |
|                |              | 38               | 75               |
|                |              | 35               | 56               |
| SVC            | GA 800 x 600 | 38               | 60               |
|                |              | 48               | 72               |
|                |              | 47               | 75               |
| XGA 1024 x 768 |              | 48               | 60               |
|                |              | 56               | 70               |
|                |              | 60               | 75               |
|                | 1152 x 864   | 68               | 75               |
| SXGA           | 1200 1021    | 64               | 60               |
|                | 1280 x 1024  | 80               | 75               |

#### 2.1 Front Panel OSD Functions









Menu: To enter OSD menu for related icon and item.

Auto Button: One-touch auto adjustment

#### 1.) Getting into Burn-in Mode

Before setting into a burn-in mode, first disconnect the AC power cord. Then press (don't let them go) the buttons until the AC power cord is connected and the "RGB" appears on the top left corner of your screen. Now it can be put into the burn-in mode for changing colors.

#### 2.) Getting Out of Burn-in Mode

Before getting out of the burn-in mode, please first disconnect the AC power cord. Then press the button (If not workable, press the button and don't let them go) until the AC power cord is connected. Please don't let your fingers go until the AC power cord is connected again and the wording of "RGB" appears on the top left corner of your screen, and wait for 3 seconds. Under the non-signal entry situation, if Cable Not Connected is seen, exit is thus successfully made.

#### When the Burn-in Mode is Unable to Eradicate...

- 1.) If the "RGB" is still on the top left corner of the screen, press to enter "Miscellaneous" and choose "Reset", and then **Yes**, and press . When the screen goes black, disconnect power and repeat the above steps.
- 2.) If the "RGB" is not found, disconnect the AC power cord first. Then press the buttons (don't let them go) until the AC power cord is connected, and wait for 2 to 3 seconds. When "RGB" appears, repeat the above steps.

#### 2.2 OSD Controls

To make any adjustment, select the following:

- 1. Press (Menu) to show the OSD menu or disable the OSD menu.
- 2. Select the icon that you wish to adjust with the ( \ or +/-) key in the menu.
- 3. Press (Menu) and then choose the item with the ( ) key.
- 4. Press (Menu) and then adjust the quality with the ( ) or +/-) key.

#### 2.3 Main Menu







In the **Main** menu, there are the following items:

- Color
- Image Setting
- Position
- OSD Menu
- Language
- Misc
- Exit

For **Color**, check out the following:

- Contrast
- Brightness
- Color Adjust
- Color Temp
- Back

For **Image setting**, check out the following:

- Clock
- Phase
- Gamma
- Sharpness
- Back



In the **Positio**n, there are the following:

- H. Position
- V. Position
- Back



In the **OSD** menu, there are:

- OSD H. Pos.
- OSD V. Pos.
- OSD Timer
- Back



In the Language menu, there are:

- English
- Frances
- Germany
- Spanish
- Traditional Chinese
- Simplified Chinese
- Japanese



ADP-1XX5A User Manual

In the **Misc** menu, there are:

- Signal Source
- Select VGA: Analogue VGA Input
- Select DVI: Digital DVI-D Input
- Select AV: Composite Video Input
- Select SV: S-Video Video Input
- Reset
- Back

# Chapter 3\_\_\_\_\_Control Board

# 3.1 Introduction to PenMount 9036CH5 Control Board (for RS-232 interface Touch Screen)

PenMount 9036CH5 Control Board is a powerful RS-232 touch screen control board to support 5-wire touch screen by executing the same drivers as all PenMount series control board and ICs. PenMount 9036CH5 is good for all kinds of resistive touch screens, user could put PenMount 9036CH5 control board in different systems space and connected to system's serial interface.

There are two connectors on board, one connector is for the power and RS-232 interface, power line is allowed to have 5V input, RS-232 interface cable has 9-pin D-sub connector, another is for 5-wire different touch screens.

**PM9036CH5** supports 5 wires touch panel, there's a 0 ohm resistance of R13 in the circuit- therefore we don't mount the component. There's a 0 ohm resistance of R12 in the circuit.





Figure 3.1: Bird's Eye View of PM9036CH5 Control Board

#### **Mechanical Size of PM9036CH5**

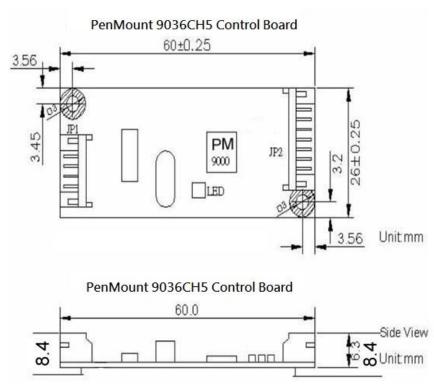


Figure 3.2: Mechanical Size of PM9036CH5 Control Board

#### **Connector Definition**

JP1 RS-232 Connector:

| PIN 1 | Ground      |
|-------|-------------|
| PIN 2 | Power Input |
| PIN 3 | RTS         |
| PIN 4 | TXD         |
| PIN 5 | RXD         |
| PIN 6 | Ground      |

JP2 Touch Screen Lines:

| PIN 1 | Ground    |
|-------|-----------|
| PIN 2 | UL (Y)    |
| PIN 3 | UR (H)    |
| PIN 4 | LL (L)    |
| PIN 5 | LR (X)    |
| PIN 6 | Sense (S) |
| PIN 7 |           |
| PIN 8 |           |
| PIN 9 |           |

#### **Driver Software**

Windows XP/ 2003/ 2008/ Vista/ 7,

Windows CE 6.0

# **Electrical Specifications:**

| Touch Screen            | For 5-wire analog resistive type                                    |
|-------------------------|---|
| Interface               | RS-232  |
| Baud Rate               | 19200 baud rate selection, N81                                      |
| Mode selection          | PnP mode  |
| Resolution              | 2048 x 2048   |
| Resistance Range        | 50~ 1.3K ohm  |
| Electrostatic Discharge | Air Discharge 15KV  |
| (ESD)                   | Contact Discharge 8KV   |
| Power Input:            | +5V DC  |
| Operating Temperature   | -20℃~ 70℃   |
| Storage Temperature     | -40℃~ 85℃   |
| Mechanical Size         | 60 x 26 mm, two 3φ screw holes                                      |
| Diagnostic              | LED on board  |
| Power Consumption       | Standby Mode: 16 mA; Active Mode: 27.5 mA                           |
|                         | (VCC=+5V, Top sheet Panel Resistance: 365 ohm ; Bottom              |
|                         | sheet Panel Resistance: 660 ohm )                                   |
|                         | Note. Actual current will be different by touch panel's resistance. |

# 3.2 Introduction to PenMount 6300A5 Control Board (for USB interface Touch Screen)

PenMount 6300A5 USB control board is a touch screen control board designed for USB interface and specific for 5-wire touch screen. It is designed with USB interface features with multiple devices supporting function. PenMount 6300A5 control board using PenMount 6000 controller that has been designed for those who may like all-in-one solution with A/D converter built-in to make the total printed circuit board denser. There two connectors on this board, one connectors is for 5-wire touch screen cable, and the other is for 4-pin USB A type cable.

**PM6300A5** supports 5 wires touch panel, there's a 0 ohm resistance of R12 in the circuit- therefore we don't mount the component.

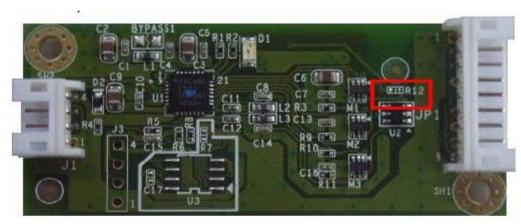




Figure 3.3: Bird's Eye View of PM6300A5 Control Board

#### **Mechanical Size of PM6300A5**

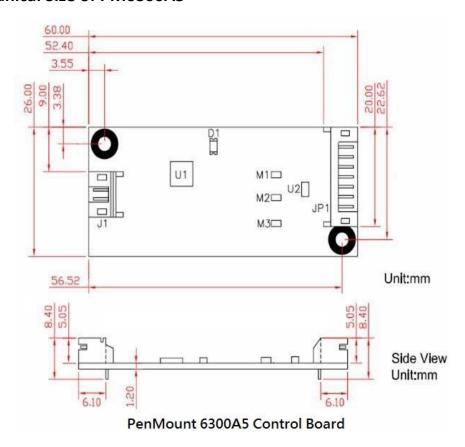


Figure 3.4: Mechanical Size of PM6300A5 Control Board

#### **Connector Definition**

JP1 USB Connector:

| PIN 1 | GND |
|-------|-----|
| PIN 2 | D+  |
| PIN 3 | D-  |
| PIN 4 | VCC |

JP1 Touch Screen Lines:

| PIN 1 | Ground    |
|-------|-----------|
| PIN 2 | UL (Y)    |
| PIN 3 | UR (H)    |
| PIN 4 | LL (L)    |
| PIN5  | LR (X)    |
| PIN 6 | Sense (S) |
| PIN 7 |           |
| PIN 8 |           |
| PIN 9 |           |

#### **Driver Software:**

Windows XP / 2003 / 2008 / Vista / 7 WinCE 6.0

# **Electrical Specifications:**

| Touch Screen             | For 5-wire analog resistive type                                    |
|--------------------------|---|
| Communications           | USB Full-speed, 12Mbps  |
| Touch Screen Controller  | PenMount 6000 controller IC   |
| Resolution               | 2048 x 2048   |
| Size                     | 60 x 26 mm, two 3φ screw holes                                      |
| Cursor accuracy          | < 1% (Active Area Diagonal of touch screen with                     |
|                          | PenMount Advanced calibration utility support)                      |
| Resistance Range         | 50~1.3K ohm   |
| Diagnostic               | LED on board  |
| Operating Voltage        | +5V DC  |
| Electro Static Discharge | Air Discharge 15KV  |
| (ESD)                    | Contact Discharge 8KV   |
| Operating Temperature    | -20℃~ 70℃   |
| Storage Temperature      | -40°℃~ 85°ℂ   |
| Power Consumption        | Standby Mode: 13.4 mA ; Active Mode: 21.5 mA                        |
|                          | (VCC=+5V, Top sheet Panel Resistance: 365 ohm ; Bottom              |
|                          | sheet Panel Resistance: 660 ohm )                                   |
|                          | Note. Actual current will be different by touch panel's resistance. |

# Chapter 4\_\_\_\_\_Installation

This chapter describes how to install drivers and other software that will allow your touch screen work with different operating systems.

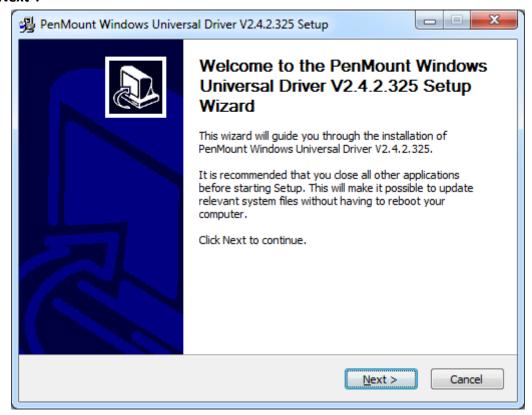
# 4.1 Windows XP/2003/Vista/7 Universal Driver

# **Installation for PenMount 9000/6000 series**

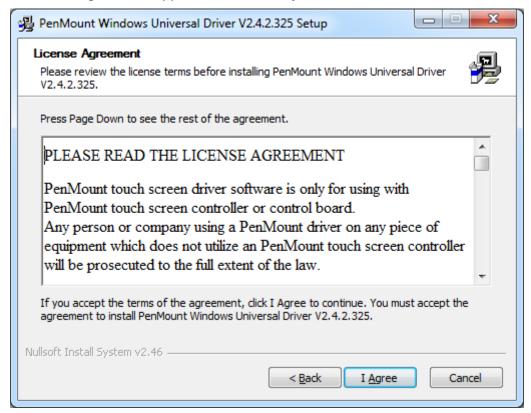
Before installing the Windows XP/2003/Vista/7 driver software, you must have the Windows XP/2003/Vista/7 system installed and running on your computer. You must also have the PenMount 9036CH5 RS-232 Interface control board or PenMount 6300A5 USB Interface control board installed.

If you have an older version of the PenMount Windows XP/2003/Vista/7 driver installed in your system, please remove it first. Follow the steps below to install the PenMount Windows XP/2003/Vista/7 driver.

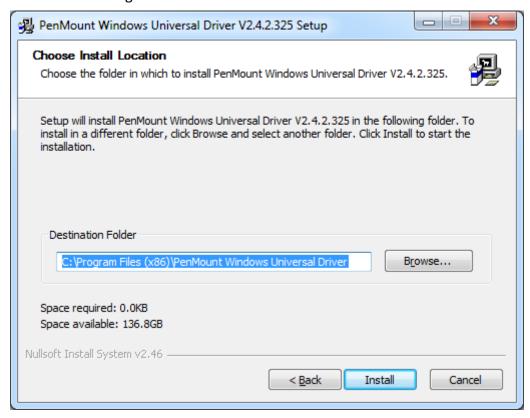
**1.** The screen displays the installation wizard for the PenMount software. Click "Next".



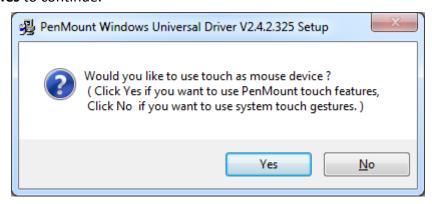
2. A License Agreement appears. Click "I accept..." and "Next".



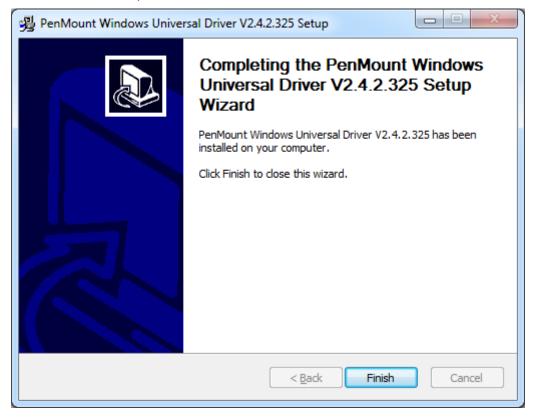
**3.** Click **Install** to begin the installation.



4. Click Yes to continue.



**5.** Click **Finish** to complete the installation.



# 4.2 Configuring the PenMount Windows

# XP/2003/Vista/7 Driver

Upon rebooting, the computer automatically finds the new PenMount 9036 RS232 interface controller board or PenMount 6300 USB interface controller board. The touch screen is connected but not calibrated. Follow the procedures below to carry out calibration.

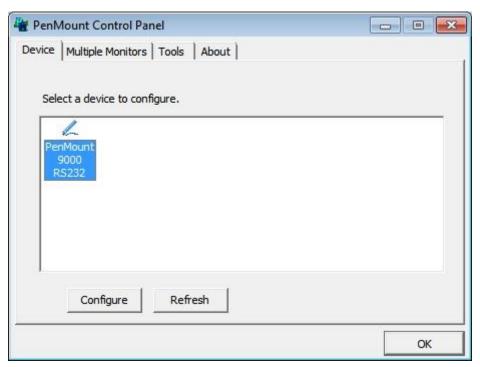
- 1. After installation, click the PenMount Monitor icon "PM" in the menu bar.
- 2. When the PenMount Control Panel appears, click "Calibrate".

#### PenMount Control Panel

The functions of the PenMount Control Panel are **Calibrate**, **Multiple Monitors**, **Tools**, and **About**, which are explained in the following sections.

#### **Device**

In this window, you can find out that how many devices are detected on your system.



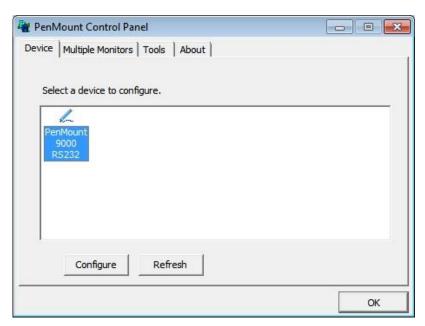
#### **Calibrate**

This function offers two ways to calibrate your touch screen. "Standard Calibration" adjusts most touch screens. "Advanced Calibration" adjusts aging touch screens.

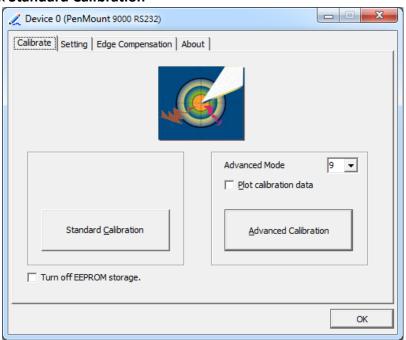
| Standard    | Click this button and arrows appear pointing to red squares. Use   |
|-------------|--|
| Calibration | your finger or stylus to touch the red squares in sequence. After  |
|             | the fifth red point calibration is complete. To skip, press "ESC". |
| Advanced    | Advanced Calibration uses 4, 9, 16 or 25 points to effectively     |
| Calibration | calibrate touch panel linearity of aged touch screens. Click this  |
|             | button and touch the red squares in sequence with a stylus. To     |
|             | skip, press "ESC".   |

#### **Standard Calibration**

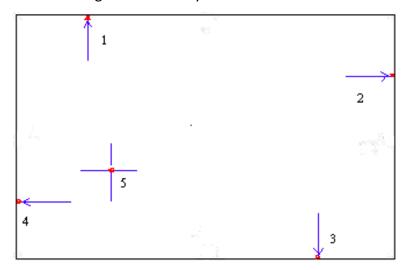
**Step 1.** Please select a device then click "Configure". You can also double click the device too.



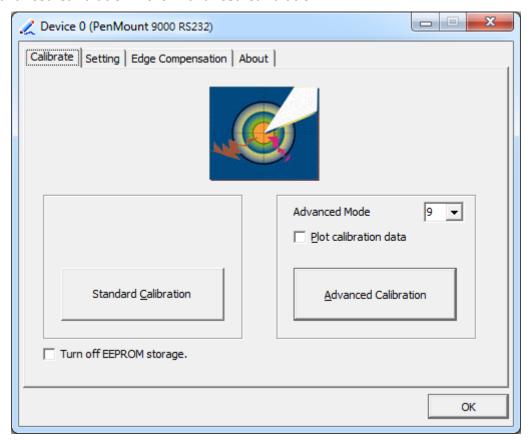
Step 2. Click Standard Calibration

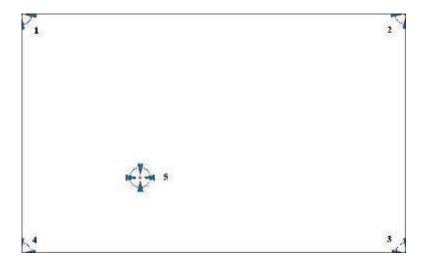


**NOTE:** The older the touch screen is, the more Advanced Mode calibration points you need for an accurate calibration. Use a stylus during Advanced Calibration for greater accuracy.



#### Advanced Calibration - click Advanced Calibration





| Plot Calibration Data | Check this function and a touch panel linearity               |  |  |
|-----------------------|---|--|--|
|                       | comparison graph appears when you have finished               |  |  |
|                       | Advanced Calibration. The blue lines show linearity before    |  |  |
|                       | calibration and black lines show linearity after calibration. |  |  |

#### **Multiple Monitors**

Multiple Monitors support from two to six touch screen displays for one system.

The PenMount drivers for Windows XP/2003/Vista/7 support Multiple Monitors. This function supports from two to six touch screen displays for one system. Each monitor requires its own PenMount touch screen control board, either installed inside the display or in a central unit. The PenMount control boards must be connected to the computer COM ports via the RS232/USB interface. Driver installation procedures are the same as for a single monitor. Multiple Monitors support the following modes:

Windows Extends Monitor Function

Matrox DualHead Multi-Screen Function

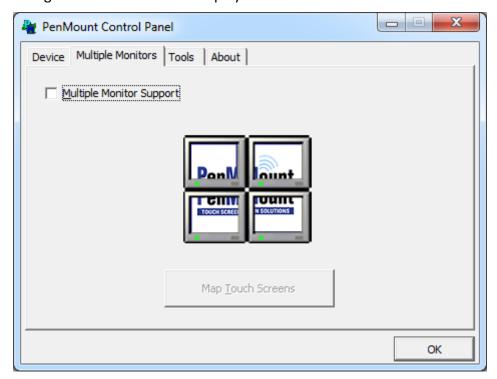
nVidia nView Function

NOTE:

The Multiple Monitor function is for use with multiple displays only. Do not use this function if you have only one touch screen display. Please note once you turn on this function the rotating function is disabled.

Enable the multiple display function as follows:

1. Check the **Multiple Monitor Support** box; then click **Map Touch Screens** to assign touch controllers to displays.



- 2. When the mapping screen message appears, click **OK**.
- 3. Touch each screen as it displays "Please touch this monitor". Following this sequence and touching each screen is called **mapping the touch screens**.



- 4. Touching all screens completes the mapping and the desktop reappears on the monitors.
- 5. Select a display and execute the "Calibration" function. A message to start calibration appears. Click **OK.**

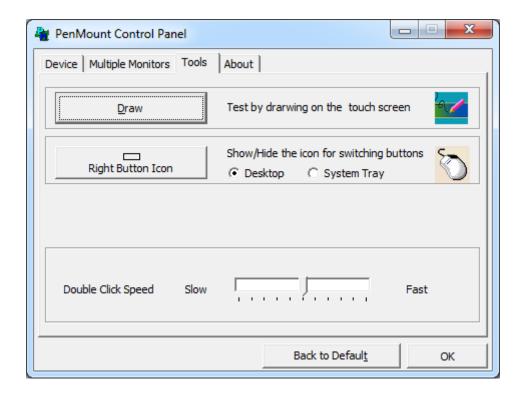


#### **NOTES:**

- If you use a single VGA output for multiple monitors, please do not use the Multiple Monitor function. Just follow the regular procedure for calibration on each of your desktop monitors.
- **2.** The Rotating function is disabled if you use the Multiple Monitor function.
- **3.** If you change the resolution of display or screen address, you have to redo **Map Touch Screens,** so the system understands where the displays are.

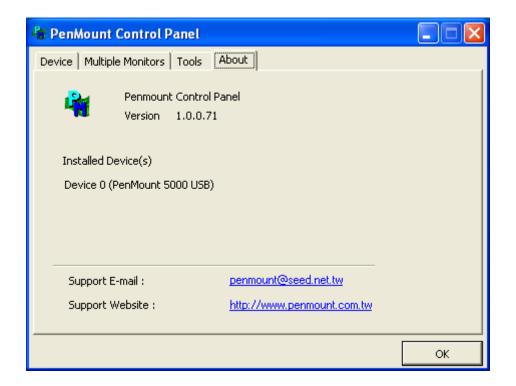
#### **Tools**

| Draw              | Tests or demonstrates the PenMount touch screen    |  |  |
|-------------------|--|--|--|
|                   | operation.   |  |  |
| Right Button Icon | Enable right button function. The icon can show on |  |  |
|                   | Desktop or System Tray (menu bar).                 |  |  |



#### **About**

This panel displays information about the PenMount controller and this driver version.



#### **PenMount Monitor Menu Icon**

The PenMount monitor icon (PM) appears in the menu bar of Windows XP/2003/Vista/7 system when you turn on the PenMount Monitor in the PenMount Utilities.



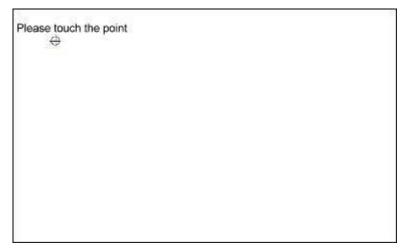
The PenMount Monitor has the following functions:



| Control Panel | Open Control Panel Windows  |
|---------------|---|
| Веер          | Setting Beep function for each device   |
| Right Button  | When you select this function, a mouse icon appears in the right-bottom of the screen.  Click this icon to switch between Right and Left Button |
|               | functions.  |
| Exit          | Exits the PenMount Monitor function.  |

#### **Configuring the Rotation Function**

- 1. Install the rotation software package.
- **2.** Choose the rotating function (0°, 90°, 180°, 270°) in the 3<sup>rd</sup> party software. The calibration screen appears automatically. Touch this point and rotation is mapped.

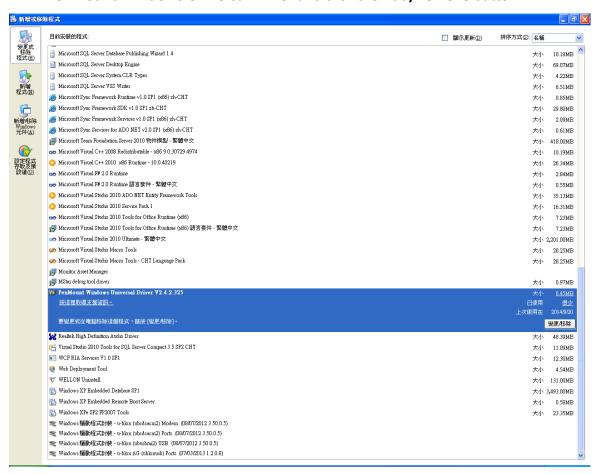


**NOTE:** The rotating function is disabled if you use Monitor Mapping

# 4.3 Uninstall the PenMount Windows XP/2003/Vista/7

#### **Driver**

- 1. Exit the PenMount monitor (PM) in the menu bar.
- Go to Settings, then Control Panel, and then click Add/Remove program. Select PenMount Windows Universal Driver and click the Add/Remove button.



3. Select "Yes" and "Close" to remove the PenMount Windows XP/2003/Vista/7 driver, and reboot the system.

# Chapter 5\_\_\_\_\_Software

# **5.1 Software Functions**

This chapter describes the special software functions that configure and adjust the PenMount controller board and touch screen hardware. Please note that not all of the functions are available for every driver. Software functions and their availability for specific interface and systems are shown in the table below—a description for each function follows:

| Software Function     | XP/2003 | Vista/7/8 | WinCE |
|-----------------------|---------|-----------|-------|
| Standard Calibration  | •       | •         | •     |
| Advanced Calibration  | •       | •         | •     |
| Multiple Monitors     | •       | •         |       |
| Multi Device          | •       | •         |       |
| Rotation              | •       | •         |       |
| Operation Mode        | •       | •         |       |
| Drawing Mode          | •       | •         | •     |
| Beep Sound            | •       | •         |       |
| Beep Sound Adjustable | •       | •         |       |
| Wake Up Function      | •       | •         |       |
| Showing Linearity     | •       | •         |       |
| Right Button          | •       | •         | •     |
| Hide Cursor           |         |           |       |
| Double Click Area and | •       | •         |       |
| Speed Adjustable      |         |           |       |
| About                 | •       | •         |       |
| Edge compensation     | •       | •         |       |
| Refresh               | •       | •         |       |

# **5.2 Software Function Description**

Description for each of the software functions shown in the table above follows:

#### **Standard Calibration**

The Standard Calibration function lets you match the touch screen to your display so that the point you touch is accurately tracked on screen. Standard calibration only requires four points for calibration and one point for confirmation. Under normal circumstances, Standard Calibration is all you need to perform an accurate calibration.

#### **Advanced Calibration**

The Advanced Calibration function improves the accuracy of calibration by using more involved engineering calculations. Use this function only if you have tried the Standard Calibration and there is still a discrepancy in the way the touch screen maps to the display. You can choose 4, 9, 16 or 25 points to calibrate, though we suggest that you first try 9 points, if it is still not tracking well then try 16 or 25 points. The more points you use for calibration, the greater the accuracy. Errors in calibration may occur due to viewing angle, or individual skill, and there may be little difference in using 16 or 25 points. Note that a stylus is recommended for the most accurate results.

#### **Multiple Monitors**

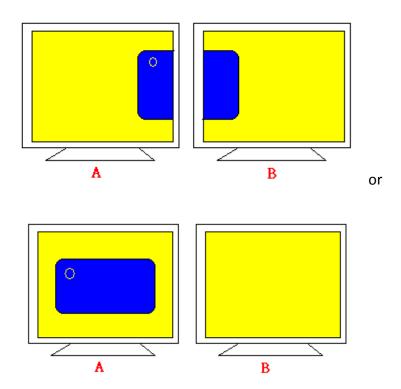
Until now most touch screen systems only support one monitor, and users of multiple monitors have not been able to use touch screen systems. This situation has inspired PenMount to design and develop Multiple Monitors support using the PenMount 9036CH5/6300A5 control board and Windows XP/2003/Vista/7 driver. Our advanced design supports from 2 to 6 monitors that can be split horizontally or vertically.

#### **Multiple Devices**

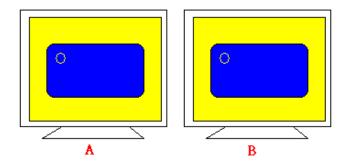
The Multiple Devices function is designed to let you use two or more monitors to display the same image. Software that supports this function includes the PenMount 9000/6000 Series drivers. The drivers for PenMount 9000/6000 Series can support up to six control boards.

#### **Comparing Functions**

The difference between the Multiple Monitors function and the Multiple Devices function are illustrated below:



The Multiple Monitors function shown above extends the screen into 2 or more monitors.



The Multiple Devices function displays the same image on two or more monitors.

ADP-1XX5A User Manual

35

#### **Rotation**

There are currently a number of software packages on the market that support rotating monitors 0°, 90°, 180°, and 270°. However, you will not be able to use a touch screen unless it is matched to the appropriate rotation. Our rotation configuration function allows you to easily match the touch screen when you rotate your monitor.

If you use a rotating monitor, you will need a display card such as from nVidia, Intel, SMI or ATI and software such as Portrait Pivot Pro. For software operation and features, please refer to your software manual.

Configuring the rotation function is easy. Select this option and a 'point' appears for you to touch. Once the point is touched, the software driver understands which degree you plan to rotate your display. The rotation function supports 90, 180 and 270 degrees rotation.



0 degrees



90 degrees

36



180 degrees



270 degrees

#### **Stream/Point Mode**

Stream and point modes control the touch and drag function of the touch screen. The point mode only allows "touch" interaction with the screen and does not allow the user to drag objects. The point mode is useful for maintaining the location of screen icons such on POS terminals. The stream mode allows a user to touch and drag icons and other items around on the screen, similar to using a mouse.

#### **Drawing Mode**

Drawing mode is a utility that lets the user draw on the screen using a finger or stylus. This allows the user to test the touch screen and touch controller to see if it is operational or is mapped correctly. The drawing mode can display either the matrix address of points touched or just show lines drawn. One of the PenMount driver's strengths is a special mathematical algorithm that minimizes the occurrence of noise and smooths the drawing of lines.

#### **Beep Sound**

All of PenMount's drivers support the beep sound function; however, some PC systems may only offer a fixed buzzer sound.

#### **Beep Sound Adjustable**

Software drivers for Windows systems let the user adjust the frequency and length of the beep sound. The drivers let the user adjust the desired touch screen sound, as well as turn the sound off.

#### **Wake Up Function**

The Wake Up function lets the user touch the screen and wake the system up from 'suspend' mode.

#### **Point Calibration Data**

The Plot Calibration Data function displays the touch screen linearity map, which is available if the PenMount driver provides an Advance Calibration function when touch screens age their touch linearity declines. This non-linearity is apparent when the touched point on the touch screen is not the same as the point on the display. The plot calibration data function shows the linearity status of the touch screen. This is only a support function for the user. The exact linearity of a touch screen requires a linearity test machine.

#### **Right Button**

The Right Button function simulates the right button function of a mouse. Click the right button and the user can only touch the screen once and the driver changes the touch definition to the left button.

#### **Hide Cursor**

The Hide Cursor function keeps the cursor arrow and other cursor symbols from appearing when using the touch screen. The cursor appears when the user turns this function off.

#### **Cursor Offset**

The Cursor Offset function lets the user adjust the position of the touch point to a desired location away from the real touch point.

#### **Double-Click Area and Speed**

The Double-Click Area and Speed function lets the user adjust the double-click area and speed to their personal preference.

#### **About**

This option shows the exact version of the drivers and controller firmware. Updated drivers are available for download on the PenMount website.